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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,445	03/18/2005	Chang-Hee Lee	5489P073	2805
<div>7590 Thomas S Ferrill Blakely Sokoloff Taylor &amp; Zafman 12400 Wilshire Boulevard Seventh Floor Los Angeles, CA 90025</div>			<div>EXAMINER PHAN, HANH</div>	
			<div>ART UNIT 2613</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE 08/22/2007</div>	<div>DELIVERY MODE PAPER</div>

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/528,445

**Applicant(s)**

LEE ET AL.

**Examiner**

Hanh Phan

**Art Unit**

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,8-10,12 and 18 is/are rejected.
- 7) ☒ Claim(s) 3,5-7,11,13-17 and 19-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Republic of Korea on 09/19/2002. It is noted, however, that applicant has not filed a certified copy of the Republic of Korea 2002-57223 application as required by 35 U.S.C. 119(b).

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4, 8-10, 12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (Pub. No.: US 2001/0004290 A1) in view of Logan, Jr. (US Patent No. 5,379,309).

Regarding claims 1, 12 and 18, referring to Figures 2, 3, 4a, 4b and 5, Lee et al teaches an apparatus, comprising:

an optical transmitter (i.e., F-P LD, Figs. 2, 3, 4a, 4b and 5) having a resonance wavelength characteristic that varies with the refractive index of the optical transmitter, wherein the optical transmitter receives a narrow band injected wavelength signal from

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an incoherent light source (i.e., ASE source, Figs. 2, 3, 4a, 4b and 5, pages 2, 3 and 4, paragraphs [0046]-[0084]).

Lee et al differs from claims 1, 12 and 18 in that he fails to teach a controller to substantially match a resonant wavelength of the optical transmitter to the wavelength of the injected wavelength signal by changing the refractive index of the optical transmitter and a detector to measure a parameter of the optical transmitter to provide a feedback signal to the controller to determine when the resonant wavelength of the optical transmitter and the wavelength of the injected wavelength signal are substantially matched. However, Logan teaches a controller to substantially match a resonant wavelength of the optical transmitter to the wavelength of the injected wavelength signal by changing the refractive index of the optical transmitter and a detector to measure a parameter of the optical transmitter to provide a feedback signal to the controller to determine when the resonant wavelength of the optical transmitter and the wavelength of the injected wavelength signal are substantially matched (i.e., Fig. 7, col. 6, lines 14-36). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the controller to substantially match a resonant wavelength of the optical transmitter to the wavelength of the injected wavelength signal by changing the refractive index of the optical transmitter and the detector to measure a parameter of the optical transmitter to provide a feedback signal to the controller to determine when the resonant wavelength of the optical transmitter and the wavelength of the injected wavelength signal are substantially matched as taught by Logan in the system of Logan. One of ordinary skill

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in the art would have been motivated to do this since allowing maintaining the output power level of the optical signal is constant and stabilized.

Regarding claim 2, Lee et al further teaches the optical transmitter having a resonance wavelength characteristic that varies with the refractive index of the optical transmitter is a Fabry-Perot laser diode (i.e., Figs. 2, 3, 4a, 4b and 5, pages 2, 3 and 4, paragraphs [0046]-[0084]).

Regarding claim 4, Lee et al further teaches the optical transmitter having a resonance wavelength characteristic that varies with the refractive index of the optical transmitter is a Fabry-Perot laser diode with antireflective coating on one or more facets of the laser diode (i.e., Figs. 2, 3, 4a, 4b and 5, pages 2, 3 and 4, paragraphs [0046]-[0084]).

Regarding claim 8, Lee et al teaches further comprising: a wavelength division multiplexer to route the narrow band wavelength to the optical transmitter (i.e., Figs. 2, 3, 4a, 4b and 5, pages 2, 3 and 4, paragraphs [0046]-[0084]).

Regarding claim 9, Lee et al teaches further comprising: a broadband light source to supply a broadband wavelength signal to the wavelength division multiplexer and the wavelength division multiplexer spectrally slices the broadband wavelength signal (i.e., Figs. 2, 3, 4a, 4b and 5, pages 2, 3 and 4, paragraphs [0046]-[0084]).

Regarding claim 10, Lee et al teaches the wavelength division multiplexer and the optical transmitter are included in a passive optical network (i.e., Figs. 2, 3, 4a, 4b and 5, pages 2, 3 and 4, paragraphs [0046]-[0084]).

***Allowable Subject Matter***

4. Claims 3, 5-7, 11, 13-17 and 19-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ryu (US Patent No. 5,793,512) discloses optical transmission system.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

  
**HANH PHAN**  
**PRIMARY EXAMINER**